

## CIRCULAR

Sub: Annual Plan 2021-22 - Scheme on Soil Health Management and Productivity Improvement - 'Soil Ameliorants in Selected Districts' -working instructions- reg

Read: (1) G.O.(Rt) No.251 12019/AD dated.08.03.2019.  
(2) Order No.ADFW 1507 I 2020 -TP2 dated 08.06.2020  
(3) Order No.ADFW 1507 12020-TP2 dated 18.08.2020  
(4) Annual Plan 2020-21.  
(5) G.O.(Rt) No .393 12020/ Agn dated.22/04 /2020.  
(6) Order No. ADFW/3 16212021-TP2 dated: 23.04.2021

As per the reference 1st cited, Government have accorded sanction for the inclusion of the component 'Soil Ameliorants in Selected Districts' under the scheme "Soil and Root Health Management and Productivity Improvement" in the Green Book for implementation during the year 2019-20. Continuous Sanction was accorded for the scheme during the financial year 2020-21 vide reference (6) cited. During the financial year 2021-22, there is a budget provision of Rs.3050.00 lakh for the above mentioned scheme under head of account 2401-00-800-28 (P) out of which an amount of Rs 3000 lakh is set apart for the component 'Soil Ameliorants in Selected Districts'

Soil is the basis of farming activity. Soil health is the basic factor for optimising crop productivity. Soil acidity is a major issue in Kerala soils and about 90% of the soil are acidic with over 50% strongly to extremely acidic. Application of soil ameliorants and nutrients based on soil testing, help in augmenting crop production. One of the detrimental effects caused by the recent floods in farming sector is the multiple damages to soil, both in wetlands and garden lands. Heavy flow of water has eroded the fertile top soil, landslips/landslides has changed the topography of large extent of area, flood water which remained stagnant in the field has deposited sand and silt over the top soil, changing the soil structure and texture, blocked soil aeration, altogether making once fertile cultivable lands unfit for cultivation. Soil became more acidic due to these reasons. Correcting soil acidity is very much essential in this condition. Since soil acidity is a major issue in Kerala soils, amelioration of soil has to be given top priority and this component is included as a systematic intervention in correcting soil acidity to improve soil fertility status.

### Objectives:

1. To correct the soil acidity (pH) and improve the soil fertility status and thereby the crop productivity.
2. To improve the intake of primary, secondary and micro- nutrients by the crops by improving soil health status.
3. To sustain good soil health through improved agricultural practices.

### Programme:

Based on the soil test data, as per general recommendation, lime @ 600 Kg/ ha could be applied to paddy crop. More quantity of lime as per soil test data, if required, can be applied by farmers at their own cost. As per the scheme, the rate of assistance for purchase and application of soil ameliorants like dolomite/ lime for one ha of paddy will be maximum of 75% of the total cost limited to Rs. 5400/- per ha. An amount of Rs.2990 lakh is set apart for the subsidy of liming materials for an area of 55370.3704 ha and an amount of Rs. 10 lakh is set apart for transportation and handling charges.

The liming material like Dolomite/ Lime/ powered lime stone @ 600 Kg/ha should be arranged in the Primary Agricultural Co-op Banks/ Societies and supplied to the farmers delinking the e- payment system. Since the Government, as per reference 3rd cited, have accorded sanction for inclusion of Kainakary Limeshell Co-operative Society Ltd. No. 2065 also for stocking and distribution of lime, they may also be considered. Tender or quotations should be invited observing Stores Purchase Rules for arrangement of the materials at the Co-operative Societies/ Co-operative Banks. The Agricultural Officer will test the liming materials and quality materials alone will be distributed. This should be ensured by the Principal Agricultural Officer and Deputy Director of Agriculture (WM).

### Neutralising value (Calcium carbonate equivalent ) of liming materials

Liming materials differ markedly in their ability to neutralise soil acidity. The effectiveness or efficiency of liming material is expressed as Calcium carbonate equivalent or neutralising value. Pure calcium carbonate is taken as the standard with a value of 100 percent. The neutralising value of common liming materials is given in Table below. The values mentioned are for pure materials and will change depending on the material. The highest neutralising value for Calcium oxide is indicative of its superiority over other liming materials in terms of efficiency to neutralise acidity.

Table. Calcium carbonate equivalent of pure forms of liming materials

Liming materials	Neutralizing value(%)
Calcium Oxide	179
Calcium hydroxide	136
Magnesium Carbonate	109
Dolomite (Calcium Magnesium Carbonate)	109
Calcium Carbonate	100
Calcium Silicate	86

(Source: Outcome of Soil Based Plant Nutrient Management Plan for Agro Eco systems of Kerala)

In the case of dolomite, materials of different quality and different price tags are available in the local market. To ensure supply of quality materials to the farmers at fair prices, it is absolutely

necessary to enforce standards already fixed by the Bureau of Indian Standards (BIS).

### **Pricing:**

The neutralizing value requirement (minimum) for dolomite is 70% and this shall be taken as the basis for fixing maximum price. Materials with neutralising value less than 60% shall be rejected.

Price of materials with NV in between may be fixed using the following formula:

$$\text{Price (calculated)} = A \times B \div 70$$

where, A = market price, B = NV as per analytical report

For example, Sample with NV 65 % and market price for standard material is Rs. 4.50 per Kg, the price for the sample can be calculated as follows:

$$\text{Price} = 4.5 \times 65 \div 70 = \text{Rs. 4.17 ps.}$$

This scheme will be implemented in an area of 55370.3704 hectares covering all districts of Kerala. The farmers who avail any assistance from any other scheme for the same purpose will not be considered for subsidy under this scheme.

### **Mode of Implementation:**

The field level implementation will be done by the Agricultural Officers of the concerned Krishi Bhavans. The quality of soil ameliorants should be ensured before distribution. The required soil ameliorants will be stocked and distributed to Padasekhara Samithies/ farmers as per the permits issued by the Agricultural Officers of the concerned Krishi Bhavans. The subsidy amount will be issued to the concerned Co-operative Societies/ Co-operative Banks who distribute the soil ameliorants, after the completion of the distribution.

The scheme will be implemented by the Deputy Directors of Agriculture (WM) at the District level and the Assistant Director of Agriculture at Block level. Since the Government is giving emphasis to women participation and gender budgeting, maximum efforts should be made to include women beneficiaries in the scheme. The number of beneficiaries and the amount utilized for such beneficiaries (component wise) should also be separately shown in the monthly progress report.

### **Timeline for implementation:**

Period	Progress (%)
April- June	45
April- september	75
April- December	90
April-March	100

### **Monitoring:**

Additional Director of Agriculture (CP) will be in charge of the programme at the State level. A State level committee under the chairmanship of the Additional Director of Agriculture (CP) and Joint Director of Agriculture (WM), Joint Director of Agriculture (VC) & Deputy Director of Agriculture (CD) as members will monitor the distribution of lime to farmers. The Principal Agricultural Officers will monitor and co-ordinate the programme at the district level. A district level



committee under the chairmanship of the Principal Agricultural Officer and Deputy Director of Agriculture (WM) & Assistant Director of Agriculture of the concerned block as members will monitor the distribution of lime to farmers. Monthly physical and financial progress report should be furnished to the Director of Agriculture by the 5<sup>th</sup> of every month.

#### Financial Outlay:

The financial outlay for this programme is Rs. 3000.00 lakh. The rate of assistance for purchase and application of soil ameliorants like dolomite/ lime for one ha of paddy will be maximum of 75 % of the total cost limited to Rs. 5400/- per hectare. Transportation and handling charges can be given to Padasekhara Samithies etc.

Sl.No.	Item	Area (Ha)	55370.3704 Subsidy per ha (Rs)	Total Assistance (Rs. Lakh)
1	Liming materials	55370.3704	5400	2990.0
2	Transportation and handling charges			10
	<b>Total</b>	<b>55370.3704</b>		<b>3000.0</b>

The physical and financial target allotted is as follows:

Sl. No.	Name of District	Area in Ha	Financial (Rs. in lakh)		
			Subsidy for liming material	Transportation and handling charges	Total
1	Thiruvananthapuram	500	27.00	0.08	27.08
2	Kollam	400	21.60	0.07	21.67
3	Pathanamthitta	1700	91.80	0.27	92.07
4	Alappuzha	17000	918.00	2.00	920.00
5	Kottayam	8000	432.00	1.20	433.20
6	Idukki	370.3704	20.00	0.80	20.80
7	Ernakulam	2500	135.00	0.45	135.45
8	Thrissur	10000	540.00	1.40	541.40
9	Palakkad	7500	105.00	1.10	406.10
10	Malappuram	4200	226.80	0.70	227.50
11	Kozhikode	500	27.00	0.80	27.80
12	Wayanad	1200	64.80	0.17	64.97
13	Kannur	1000	54.00	0.16	54.16
14	Kasaragod	500	27.00	0.80	27.80
	<b>Total</b>	<b>55370.3704</b>	<b>2990.00</b>	<b>10.00</b>	<b>3000.00</b>

The targets should be re distributed based on Agro Ecological Zone and the same should be communicated to this office on or before 15-06-2021

The total financial requirement of the programme of Rs. 3000.0 lakhs can be met from the current years' budget provision under the head of account **2401-00-800-28 Plan.**

The working Instructions for the components 'Root Health Management Practices' and 'Support for secondary and micro nutrients and green manure' will be issued seperately.

**Sd/-  
Director of Agriculture**

Copy to:

1. All Princiapl Agricultural Officers
2. Assistant Directors of Agriculture of all districts
3. TA to Director of Agriculture
4. All Additional Directors of Agriculture
5. Joint Director of Agriculture (WM)
6. Joint Director of Agriculture (VC)
7. Deputy Director of Agriculture (CD)
8. DDA, IT Cell ( for publishing in the website)
9. Planning section for allotment of funds
10. SW section
11. Stock file/ Spare



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